THAT WHICH IS CLAIMED IS:

1. Wideband speech encoding method in which the speech is sampled in such a way as to obtain successive voice frames each comprising a predetermined number of samples, and with each voice frame are determined parameters of a code-excited linear prediction model, these parameters comprising a long-term excitation digital word (v_i) extracted from an adaptive coded directory (LTD), and an associated long-term gain (Ga), as well as a short-term excitation word (cj) extracted from a fixed coded directory (STD) and an associated short-term gain (Gc), and the adaptive coded directory is updated on the basis of the extracted long-term excitation word and of the extracted short-term excitation word, characterized in that the product of the long-term excitation extracted word times the associated long-term gain is summed (SM) with the product of the short-term excitation extracted word times the associated short-term gain, the summed digital word is filtered in a low-pass filter (FLCT) having a cutoff frequency greater than a quarter of the sampling frequency and less than a half of the latter, and the adaptive coded directory is updated with the filtered word.

2. Method according to Claim 1, characterized in that the summed word is filtered with a linear-phase finite impulse response digital filter (FLCT) having an order at least equal to 10.

3. Method according to Claim 2, characterized in that the sampling frequency is 16 kHz,

and in that the filter (FLCT) is a filter of order 20 having a cutoff frequency of the order of 6 kHz.

4. Method according to one of the preceding claims, characterized in that the extraction of the short-term excitation word comprises a linear prediction digital filtering (PF), and in that the method comprises an updating of the state of the linear prediction filter with the short-term excitation word filtered by a filter (Gc') whose coefficient or coefficients depend on the value of the long-term gain, in such a way as to weaken the contribution of the short-term excitation when the gain of the long-term excitation is greater than a predetermined threshold.

5. Method according to Claim 4, characterized in that the predetermined threshold is equal to 0.8.

6. Method according to Claim 5, characterized in that the filter is of order 1 and has a transfer function equal to $B0+B1\ z^{-1}$, and in that the first coefficient of the filter B0 is equal to $1/(1+\beta.\min(Ga,1))$, and the second coefficient of the filter B1 is equal to $\beta.\min(Ga,1)/(1+\beta.\min(Ga,1))$, where β is a real number of absolute value less than 1, Ga is the long-term gain and min(Ga,1) designates the minimum value between Ga and 1.

7. Method according to one of the preceding claims, characterized in that the extraction of the long-term excitation word is performed using a first perceptual weighting filter (PWF1) comprising a first formantic weighting filter, in that the extraction of

the short-term excitation word is performed using the first perceptual weighting filter (PWF1) cascaded with a second perceptual weighting filter (PWF2) comprising a second formantic weighting filter, and in that the denominator of the transfer function of the first formantic weighting filter is equal to the numerator of the second formantic weighting filter.

8. Method according to Claim 7 taken in combination with one of Claims 4 to 6, characterized in that it comprises an updating of the state of the two perceptual weighting filters with the short-term excitation word filtered by the said filter of order 1.

9. Wideband speech encoding device comprising

- sampling means able to sample the speech in such a way as to obtain successive voice frames each comprising a predetermined number of samples,

- processing means able with each voice frame, to determine parameters of a code-excited linear prediction model, these processing means comprising first extraction means (MEXT1) able to extract a long-term excitation digital word from an adaptive coded directory and to calculate an associated long-term gain, and second extraction means (MEXT2) able to extract a short-term excitation word from a fixed coded directory and to calculate an associated short-term gain, and

- first updating means (UPD) able to update the adaptive coded directory on the basis of the extracted long-term excitation word and of the extracted short-term excitation word, characterized in that the first updating means comprise

- first calculation means (SM) able to sum the product of the long-term excitation extracted word times the associated long-term gain, with the product of the short-term excitation extracted word times the associated short-term gain, in such a way as to deliver a summed digital word, and

- a low-pass filter (FLCT) having a cutoff frequency greater than a quarter of the sampling frequency and less than a half of the latter, and connected between the output of the first calculation means and the adaptive coded directory in such a way as to update this adaptive directory with the filtered word.

10. Device according to Claim 9, characterized in that the low-pass filter (FLCT) is a linear-phase finite impulse response digital filter having an order at least equal to 10.

11. Device according to Claim 10, characterized in that the sampling frequency is 16 kHz, and in that the filter (FLCT) is a filter of order 20 having a cutoff frequency of the order of 6 kHz.

12. Device according to one of Claims 9 to 11, characterized in that the first extraction means comprise a linear prediction digital filter (PF), and in that the device comprises second updating means (UPD2) able to perform an updating of the state of the linear prediction filter with the short-term excitation word filtered (Gc') by a filter whose coefficients depend on the value of the long-term gain, in such a way as to weaken the contribution of the short-term

excitation when the gain of the long-term excitation is greater than a predetermined threshold.

13. Device according to Claim 12, characterized in that the predetermined threshold is equal to 0.8.

14. Device according to Claim 13, characterized in that the filter is of order 1 and has a transfer function equal to $B0+B1\ z^{-1}$, and in that the first coefficient B0 of the filter is equal to $1/(1+\beta.\min(Ga,1))$, and the second coefficient B1 of the filter is equal to $\beta.\min(Ga,1)/(1+\beta.\min(Ga,1))$, where β is a real number of absolute value less than 1, Ga is the long-term gain and min(Ga,1) designates the minimum value between Ga and 1.

15. Device according to one of Claims 9 to 14, characterized in that the first extraction means comprise a first perceptual weighting filter (PWF1) comprising a first formantic weighting filter, in that the second extraction means comprise the first perceptual weighting filter cascaded with a second perceptual weighting filter (PWF2) comprising a second formantic weighting filter, and in that the denominator of the transfer function of the first formantic weighting filter is equal to the numerator of the second formantic weighting filter.

16. Device according to Claim 15 taken in combination with one of Claims 12 to 14, characterized in that the second updating means are able to perform an updating of the state of the two perceptual

weighting filters with the short-term excitation word filtered by the said filter of order 1.

17. Terminal of a wireless communication system, characterized in that it incorporates a device according to one of Claims 9 to 16.

18. Terminal according to Claim 17, characterized in that it forms a cellular mobile telephone.